

## #648603 COIL SPRING COMPRESSOR INSTRUCTIONS

This combination tool set includes special tools used to remove and install the front shock absorber nuts on many domestic vehicles. These shocks have a special stem shaped like a pair of the letter D positioned back to back (referred to as "Double D"). On vehicles with these types of shocks the following procedure should be followed to remove the shock nuts if changing shocks at the same time as servicing springs. Before proceeding with spring removal, make sure to first loosen or remove the shock nuts as necessary using the included shock absorber tool set. To do so, use the following procedure:

### Procedure for removing "Double D" type shock absorber nuts:

1. Place the provided 9/16" hex socket over the hex nut on the shock
2. Fit the proper size oval ("Double D") socket over the end of shock stem
3. Insert the square drive wrench (Red handle) into oval socket and hold to keep shock stem from turning.
4. Turn the 9/16" hex socket with a 3/4" end [probably an open end wrench] wrench to remove shock nuts. See figure (a).

### Procedure for Removing Springs:

#### Straight Springs

1. Lubricate threads on spring compressor with engine oil.
2. Remove the wheel and tire following the manufacturer's servicing information.
3. If the vehicle has a shock absorber that is located inside the coil spring, remove the shock from the vehicle following the manufacturer's servicing information.
4. If the shock is located outside of the coil spring, remove the upper or lower attaching bolt to disengage the shock. See figure (b).
5. Clean any grease or oil from the coil spring. Do NOT attempt to compress an oily spring.
6. Remove the nut and spring retainer located inside and at the bottom of the coil spring. See figures (c), (d) and (e).
7. Insert the spring compressor through the hole at the top of the shock tower or spring seat.
8. Install the hook assemblies to the coils closest to the ends of the spring where the hooks will fit easily. Note that there should be a short and long hook on each side of the spring. The distance between the ends of the hooks should be equal on each side. Spring compressor should NOT have both short hooks on one side and both long hooks on the other side. See figure (f).
9. Hand tighten the nut at the end of the shaft until there is slight tension on the spring. Make sure the spring compressor is positioned straight up and down and that the center bolt is parallel to the spring. The hooks should line up with each other. See figure (f).
10. Place an end wrench or ratchet on the center shaft's fixed nut. Carefully turn the nut while making sure that the hooks stay properly positioned on the spring coils. See figure (g).
11. Compress the spring only enough to clear spring seat and remove from the vehicle. In most cases, about 3-4" will be enough. Do not compress more than necessary. See figure (h).
12. Carefully remove spring from vehicle.

#### Procedure for Removing Curved Springs:

The procedure for curved springs is the same as that for straight springs, but for curved springs the hook assemblies must be installed so that both short hooks are on one side of the spring and both long hooks are on the other side.



Figure (a)



Figure (b)



Figure (c)



Figure (d)



Figure (e)



Figure (f)



Figure (g)



Figure (h)